

CONTRIBUTIONS TO A KNOWLEDGE OF THE FLORA OF AUSTRALIA.

No. I.

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(Plate x.)

PITTOSPOREÆ.

*CHEIRANTHERA FILIFOLIA, *Turcz.*—Wallangara, N.S.W. In the open and on the slopes of granitic ridges (Mr. D. A. Porter).

The specimen forwarded by Mr. Porter is a smaller plant than any I have yet seen of *C. linearis*, A. Cunn., and agrees fairly well with Bentham's description of *C. filifolia*, except perhaps in the relative length of the anthers and filaments,—points, I find, that are not constant; and so with the balance of evidence in favour of this species I now record it for Eastern Australia, believing that further material will confirm my present determinations. If this should prove not to be *C. filifolia*, A. Cunn., then I think the latter name will have to be considered as a synonym of *C. linearis*, Bentham himself stating (*B.Fl.* i. p. 127) that the two are closely allied.

STERCULIACEÆ.

SERINGIA PLATYPHYLLA, *J. Gay.*—Murwillumbah, Tweed River (W. Bäuerlen).

TILIACEÆ.

ELÆOCARPUS BAEUERLENI, *J.H.M. et R.T.B.*—Richmond River, Emigrant Creek at Tintenbar and Byaneum, 5 miles from Mullumbimby, Tweed River (W. Bäuerlen).

* Species marked with an asterisk have not previously been recorded from New South Wales.

RUTACEÆ.

BORONIA MICROPHYLLA, *Sieb.*—Braemar, Southern Line. In flower in October (Miss J. Lane). This is its most southern recorded locality and extends its range from Parramatta.

The specimens examined confirm, I think, Bentham's decision (*B.Fl.* i. 318) in preserving the specific rank of this *Boronia*, as opposed to the opinion of Baron von Mueller, who unites it with *B. pinnata*, Sm. I show specimens of both species collected from the above localities, and the constant form of leaf of each species throughout the varying environments is very marked.

CROWEA EXALATA, *F.v.M.*—On the banks of Still Creek, Woniora River; only represented by a few bushes (Mr. H. Clarke).

The late Dr. Woolls says of this plant—"It is rather curious that only one shrub of this species has ever been found on low ground, and that was near Parramatta some years ago. Within the last few months a few more shrubs have been discovered at Kurrajong." (*Proc. Linn. Soc. N. S. Wales*, 1886 (2), i. p. 929).

ERIOSTEMON SALICIFOLIUS, *Sm.*—Evans River (W. Bäuerlen). There is no previous record of this local species to the north of Port Jackson.

ASTEROLASIA CORREIFOLIA, *Benth.*—Murwillumbah, Tweed River (W. Bäuerlen). Previously not recorded further north than Gosford.

RHAMNEÆ.

POMADERRIS PRUNIFOLIA, *A. Cunn.*—As far west as Raglan, Bathurst (W. J. C. Ross, B.Sc.). The specific differences between this species and *P. betulina*, A. Cunn., are not very marked, but perhaps *P. prunifolia* is best distinguished by the scabrous and wrinkled surface of its leaves.

LEGUMINOSÆ.

OXYLOBIMUM PROCUMBENS, *F.v.M.*—Strathdownie, Rosewood, *via* Wagga Wagga (Mr. D. McEacheron). This extends its range further north than hitherto recorded.

ACACIA MAIDENI, *F.v.M.*—A quantity of fresh fruiting material of this species has recently been examined by me, and from my observations it would appear that an error has occurred in the delineation (mei) and description (*F.v.M.*) of the arillus, in the Macleay Memorial Volume. Our collector now admits having inadvertently wrongly matched the pods. Those figured are from *A. melanoxydon*, R Br. The true seed has a much shorter arillus under it and not encircling the seed at all. It has only two or three short folds. A strict examination, however, revealed nothing to shake its specific rank. The fruits and seeds are quite distinct from those of *A. glaucescens*, its ally.

SAXIFRAGÆ.

*ARGOPHYLLUM NITIDUM, *Labill.*—(Plate x). Mt. Nullum and Tumbulgon, Tweed River (W. Bäuerlen).

For the identification of this species I am indebted to J. G. Luehmann, F.L.S. The only locality given in the *Index Kewensis* (Vol. i. p. 183) is New Caledonia, so that it is therefore new for Australia. In the above reference Forster is quoted as the author, and it is very probable that it was on this species that the genus was founded (*Forst. Char. Gen.* 30). Bentham, however, (*B.Fl.* ii 437) ascribed the authorship to Labillardière, but I should like to venture an opinion that *A. ellipticum* is what is intended (vide *Index Kewensis*, Vol. i. p. 183).

There is apparently no description of this species extant. It is a very pretty shrub of about 20 to 30 feet high. The branches and inflorescence are clothed with a close silky white tomentum more silvery than in *A. Lejordanii*, *F.v.M.* Leaves ovate, acuminate, varying from 4 to 7, 8 or even 9 inches long and up to 2 inches broad, on a petiole of $\frac{1}{2}$ inch long or more, entire or serrate, light green and glabrous above, silvery-white underneath with a close silky tomentum, the pinnate parallel veins and midrib not prominent on the upper surface.

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Inflorescence a loose corymbose terminal panicle, much exceeding the leaves, or in the upper axils much shorter than the leaves. Flowers when fully^{*} expanded exceeding 3 lines in diameter. Calyx turbinate or hemispherical, adnate to the ovary, lobes 5, persistent, acute. Petals 5, valvate, persistent, fringed inside below the middle with long hairs forming a corona. Capsule glabrous, about 2 lines in diameter, hemispherical, mostly 3-valved; seeds very small, reticulate.

Comparing the above with the delineations in Forst. Char. Gen. p. 30, and which I reproduce (Pl. x. figs. 1-10; upper division of the plate) it will be found there are many points of difference, as for instance the nectary (which I cannot understand in Forster's figure), the calyx lobes and capsule.

I have endeavoured to obtain New Caledonian specimens for comparison, but have not been successful. If this should be distinct from the New Caledonian plant, I would suggest the name of *A. Nullumensis*, from the locality where first obtained.

CERATOPETALUM GUMMIFERUM, *Smith*.—Mr. W. Bäuerlen, reporting on this species, says—"At Moonambah, Tweed River, I have seen trees lately fully 60 feet high and 18 inches in diameter, but they were so situated that it would be exceedingly difficult to obtain a log from the locality." These are dimensions that surpass any previous records.

CERATOPETALUM APETALUM, *D. Don*.—McPherson Ranges, six miles from the Queensland boundary (W. Bäuerlen). This is a considerable extension of range, as it was previously only known for a few miles north of Port Jackson.

COMPOSITÆ.

CASSINIA ARCUATA, *R.Br.*—As far east as Upper Pyramul (Mrs. A. Tindall). Previously recorded from the Darling River.

CASSINIA SUBTROPICA, *F.v.M.*—Moonambah and Billundgel, Tweed River (W. Bäuerlen). Lindsay is the only locality given in *B.Fl.* (iii. p. 588).

GOODENOVIÆ.

SCÆVOLA ÆMULA, *R.Br.*—Bundanoon, near Moss Vale (Mr. B. Dunstan). A dry country species.

EBENACEÆ.

CARGILLIA MABACEA, *F.v.M.*—Mullumbimby, Brunswick River. A species of doubtful affinities, as it was described without female flowers and fruits. The latter have now been collected by Mr. Bäuerlen in the above locality, which is probably its most southern locality. They may be described as depressed globular and oval in shape, $\frac{1}{2}$ to over 1 inch long and 1 inch in diameter; calyx persistent; colour bright red: containing 2-7 seeds. The average height of the tree is from 25-60 feet; timber white, but of little use, being very susceptible to the attacks of *Xyleborus* spp.; bark black, laminated.

APOCYNÆÆ.

*OCHROSIA POWERI, *Bail.*—Murwillumbah, Tweed River (W. Bäuerlen). Originally described by F. M. Bailey in his Botany Bulletin, xiii. p. 11, from fruits and foliage only. Full material has been collected by Mr. Bäuerlen. The flowers I will not describe here, as I have sent some to Mr. Bailey and have asked him to publish a description in his Bulletins, so that a complete account of the whole plant may be found in the same serial. The plant in this colony grows to a shrub of about 10 feet high.

TABERNÆMONTANA ORIENTALIS, *R.Br.*—As far south as the Hastings River (R. Harper).

*SOLANUM CILIATUM, *Lam.* (*S. aculeatissimum*, *Jacq.*).—Lismore (W. Bäuerlen). This is the first record of the occurrence of this exotic in New South Wales, though it has been known to me from the neighbourhood of Sydney for some years, but confounded with *S. sodomæum*. I am indebted to Mr. J. G. Luehmann, F.L.S., for the correct diagnosis.

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LAURINEÆ.

TETRANTHERA (LITSEÆ) RETICULATA, *Meissn.*—There has long been a doubt as to the exact botanical determination of the marketable timber passing under the name of “She Beech.” Many authors have referred it to *Cryptocarya glaucescens*, R.Br., and specimens of timber exhibited in International Exhibitions and now in the Technological Museum were labelled with the latter name queried; but I think now the matter can be definitely settled, as I have acquired botanical (timber and flowering) specimens from Gosford, Port Macquarie and Lismore, and without doubt “She Beech” is *Tetranthera reticulata*, Meissn.

The timber of *Cryptocarya glaucescens* is quite distinct, being much lighter in colour, more durable and with little or no figure, as against the rich brown colour and large figure of *T. reticulata*.

“She Beech” timber is, I find, also being sold in the Sydney market under the name of “Bully or Bolly Gum,” so that we have the timber merchants selling to an unsuspecting public apparently two distinct timbers, but which are in reality from one and the same species, *i.e.*, *T. reticulata*.

CASSYTHA PANICULATA, *R.Br.*—Bundanoon (T. Steel, F.L.S.). Not previously recorded south of Port Jackson.

PROTEACEÆ.

*GREVILLEA ILICIFOLIA *R.Br.*—Kyamba (Forester Taylor). Locally known as “Wild Holly.”

URTICEÆ.

FICUS MUELLERI, *Miq.*—As far north as Lismore (W. Bäuerlen).

*LAPORTEA MOROIDES, *Weddell.*—Murwillumbah, Tweed River (W. Bäuerlen). A nettle with “most virulent stinging hairs,” previously only known from Queensland.

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PANDANEÆ.

*FREYCINETIA EXCELSA, *F.v.M.* — North Tumbulgum, Tweed river (W. Bäuerlen). "In gullies and trailing along the ground, chiefly, however, ascending the trunks of trees to a height of 100-120 feet, mostly in straight stems, though also sometimes in a spiral or at least crooked course; these stems are often very numerous; for instance, to-day I have seen a tree along the trunk of which there must have been fully 80 stems, forming an interlacing network for some distance up the tree. This is, as far as I have seen, an exceptional tree, but trees along which from 30-40 stems are running are not exceptional. These stems are usually from $\frac{1}{2}$ inch to $\frac{3}{4}$ inch in diameter, and soon commence to branch, the branches being usually very slender and from 1 inch to 5 feet in length, mostly gracefully drooping. The young stems have quite a different appearance, having the leaves much shorter and broader, also much further apart."

As it has only been recorded from imperfect material, I now add the following systematic notes:—Female spikes terminal, solitary, ovoid oblong, 1 to $1\frac{1}{2}$ inch long on peduncles of about 1 inch long; of a bright crimson colour. Ovaries very numerous, compact, cohering at their bases, free in the upper half, divided mostly into two stigmas, occasionally three, as in *F. Gaudichaudii*. R.Br. and Benn. Fruit bursting irregularly, as also in that species. Seeds numerous, oblong, flat, about $\frac{1}{2}$ line long, testa light yellow, with white oblong cellular longitudinal appendages or strophioles as long as the seeds.

This plant exudes on its leaves a red resinous substance, the colouring being contained in the resinous portion; it is removed by alcohol, the residue consisting of gum. The exudation is thus a gum-resin. It was not in sufficient quantity to accurately determine its constituents more fully.

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GRAMINEÆ.

ANDROPOGON REFRACTUS, *R.Br.*—Moree, on the Gwydir River (Surveyor Archibald Lockhart). Mostly a coast grass.

ASTREBLA PECTINATA, *F.v.M.*—As far east as Calga, Gilgandra, 292 miles west of Sydney (Messrs. Ryder Bros). The material sent was very complete and showed such a variety of forms as to prove conclusively to me that there is little reason for retaining *A. triticoides* as a distinct species.

FILICES.

*PTERIS ENSIFORMIS, *Burm.*—Bundanoon (Mr. B. Dunstan). A Queensland species.

POLYPODIUM ASPIDIODES, *Bail.*—Bundanoon (Mr. B. Dunstan). This species was first recorded from this Colony by J. H. Maiden and R. T. Baker (Proc. Linn. Soc. 1895, Vol. x. (2), p. 517) as occurring at Tintenbar.

FUNGI.

I have to acknowledge my indebtedness to Mr. M. C. Cooke, M.A., LL.D., A.L.S., for the identification of the majority of the following fungi.

*AGARICUS (PSATHYRELLA) TREPIDUS, *Fr.*—Technical College grounds, Sydney; recorded previously only from Victoria.

*CORTINARIUS ARCHERI, *Berk.*—Moonambah, Tweed River, in sandy soil (W. Bäuerlen). "It is of a rich violet colour when fresh" (W.B.). Previously recorded only from Tasmania (Cooke's *Aust. Fungi*, p. 72).

*LENTINUS SUBDULCIS, *Berk.*—Alstonville, N.S.W. (W. Bäuerlen). A sweet-scented fungus found on the stumps of the Bangalow Palm.

*PANUS TORULOSUS, *Fries.*—Ballina (W. Bäuerlen).

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*LENZITES GUILFOYLEI, *Berk.*—Mogo, Bateman's Bay (W. Bäuerlen).

*POLYPORUS TUMULOSUS, *Cooke.*—Lismore, (W.B.)

*POLYSTICTUS RASIPES, *Berk.*—Moonambah (W. Bäuerlen).
On trunks of trees.

*P. VINOSUS, *Berk.*—Moonambah, Tweed River (W. Bäuerlen).

*P. CICHORACEUS, *Berk.*—Sugar Loaf Mountain, Monga [Braidwood]. (W. Bäuerlen).

*POLYSTICTUS RIGESCENS, *Cooke.*—Ballina. Not previously recorded from Australia.

*P. ELONGATUS, *Berk.*—Tintenbar (W. Bäuerlen). A beautiful delicate silky fungus, with a violet-coloured edge.

*POLYSTICTUS HASSKARLII, *Lév.*—Tweed Heads; on the stem of a living tree (W. Bäuerlen).—A tawny scoop-shaped fungus.

*HEXAGONIA WIGHTII, *Klotsch.*—Lismore (W. Bäuerlen).

*H. TENUIS, *Hook.*, var. SUBTENUIS, *Berk.*—Moonambah, Tweed River; and Ballina (W. Bäuerlen).

*H. DECIPIENS, *Berk.*—Botany, near Sydney.

*HYDNUM MERULOIDES, *Berk.*—Ballina (W. Bäuerlen).

*STEREUM CAPERATUM, *Berk.* & *M.*—Ballina (W. Bäuerlen).
Also in Lord Howe Island.

S. CAPERATUM, *Berk.* & *M.*, var. SPONGIPES, *Berk.*—(W. Bäuerlen).

*HYMENOCHETE TENUISSIMA, *Berk.*—Ballina (W. Bäuerlen).
A thin ferruginous fungus not previously known to occur in Australia.

*AURICULARIA ALBICANS, *Berk.*—Tintenbar; on old logs (W. Bäuerlen).

*COLUS HIRUDINOSUS, *C.* & *S.*—Glanmire, Western Line (A. G. Ivatt). Cooke records it from West Australia.

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**CALOSTOMA FUSCA*, *Berk.*—Dorrigo (J. H. Maiden), and at Hornsby, N.S.W. (W. W. Froggatt).

**XYLARIA ALLANTOIDEA*, *Berk.*—Ballina (W. Bäuerlen). A remarkable fungus.

**DICHOMERA SERICEA*—Tintenbar (W. Bäuerlen). Not previously recorded from Australia.

EXPLANATION OF PLATE.

Argophyllum sp. *Forst. Char. Gen. t. 30.*

- Fig. 1.—Flower (enlarged).
- Fig. 2.— „ „
- Fig. 3.—Petal.
- Fig. 4.—Calyx with nectary
- Fig. 5.—Part of petal showing fringe (enlarged).
- Fig. 6.—Corolla (dissected).
- Fig. 7.—Stamen (enlarged).
- Fig. 8.—Capsule „
- Fig. 9.—Pistil.
- Fig. 10.—Capsule (enlarged and dissected).

Argophyllum nitidum.

- Fig. 1.—Panicle of inflorescence.
- Fig. 2.—Leaf with lateral panicle.
- Fig. 3.—Bud (enlarged).
- Fig. 4.—Expanded flower (enlarged).
- Fig. 5.—Seed vessel.
- Fig. 6.—Top view of 5.
- Fig. 7.—Seed (nat. size).
- Fig. 8.—Seed (enlarged).

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